



START-UP OF GAS-FIRED WATER HEATERS

****FOR DETAILED INFORMATION SEE INSTALLATION & MAINTENANCE MANUAL ****

1. Visually inspect water heater and components for damage and proper installation.
2. Check all electrical connections for tightness and proper voltage.
3. Check water heater tank to make sure it is full of water. **(Remove air through T&P valve).**
4. Pull nozzle assembly from burner and check gap settings on electrodes **(see I&M).**
5. While nozzle is removed, look inside through burner for obstructions.
6. Check fan rotation.
7. Check air shutter setting **(guideline on burner tag).**
8. Drill hole in vent pipe 12" to 24" from heater flue outlet but below draft regulator **(for analysis equipment).**
9. Attach voltmeter to controller to record flame signal.
10. Check inlet static gas pressure before gas train **(see rating on heater decal).**
11. Attach manometer to manifold to read pressure **(tapping closest to burner).**
12. Turn off main manual gas valve and start burner on pilot **(if burner has separate pilot).**
 - a) Set pilot to give good flame signal with just enough gas to reliably light pilot.
NOTE: If there is no pilot, set gas pressure (guideline on burner tag).
 - b) Slowly open main gas and set gas pressure **(guideline on burner tag).**
 - c) Check flame signal **(should be in range called for by control).**
13. Check inlet flow gas pressure before gas train.
NOTE: Should meet or exceed minimum rating listed on heater decal.
14. Check vent draft in stack **(should be negative .02" to negative .06" W.C.).**
15. Perform flue gas analysis after achieving water temperatures above 120°F.
NOTE: Modulating burners should be checked at 25% increments.
 - a) Net stack temperature should be 300°F - 400°F **(read in stack, all units).**
 - b) O₂ should be from 4% to 7% **(atmospheric units tested below draft diverter).**
 - c) CO₂ should be from 8% to 10% **(atmospheric units tested below draft diverter).**
 - d) CO should not exceed 200 PPM **(atmospheric units tested below draft diverter).**

NOTE: A complete and proper start-up includes checking the operation of all controls and limits (i.e. airflow switch, LWCO, thermostats, and modulating controls), and filling out the entire start-up report. All discrepancies should be reported to the PVI Customer Service Department (800-433-5654) from the job site and detailed on the comment section of the start-up report. Attach notes to report if needed. Also, please call if you have any questions or need assistance.



START-UP REPORT

GAS FIRED NON-CONDENSING WATER HEATERS

Atmospheric - MAXIM[®] - TURBOPOWER[®]

Warning: Startup must be performed by a qualified service installer, service agency or the gas supplier.

Model Number: _____ Serial Number: _____

Job Name: _____

Address: _____

GENERAL INFORMATION

Restart? Yes No Installation is: New Replacement/Renovation Indoor Outdoor
Primary operating voltage: _____ VAC Voltage from neutral to earth ground: _____ (should be zero)
Thermostat Setting: _____ °F Thermostat Setting: _____ °F Hi-Limit Setting _____ °F
T & P Relief Valve(s) plumbed to a suitable drain? Yes No

WATER HEATER INSTALLATIONS

Type of piping connected to heater: Copper Brass Galvanized
Is there a check valve in the supply water piping? Yes No
Is there a water softener on the cold water supply? Yes No Operational? Yes No
Is there a mixing valve on the hot water supply? If yes; temperature setting: _____ °F No
Is there expansion relief in the cold water supply? If yes, what type: tank valve No
Is there a recirculation loop? Yes Circulating pump horsepower: _____ No
Is there a floor drain in the room? Yes No

VENTING and COMBUSTION AIR

Vent Material: _____ Vent Type: Through-the-roof Through Sidewall
Vent Diameter: _____ inches; Vent Length: _____ feet Does vent have elbows? Yes; Qty _____ No
Does vent have condensate drain? Yes No
Does vent contain any of these devices? Power Vent Draft Inducer Draft Regulator Flue Damper
Combustion air louvers or openings? Yes; Qty: _____ Size: _____ No Interlocked? Yes No
Have direct-ducted combustion air? Yes; duct diameter _____ inches, Duct length _____ feet. No
Duct Material: _____ Does duct have elbows? Yes; Qty _____ No



Model Number: _____ Serial Number: _____

GAS SUPPLY

Type of gas: Natural LP Gas Supply Pipe Size: _____ inches
Inlet Static Gas Pressure: _____ "W.C. (14" W.C. maximum)
Inlet Flow Gas Pressure: _____ "W.C. (see data label)
Combination Gas Pressure Switch Setting: High _____ / Low _____ "W.C.

COMBUSTION ANALYSIS

BURNER MODEL NO.: _____		BURNER SERIAL NO.: _____			
(For fixed rate burner, use High Fire column)	Low Fire		Mid Fire		High Fire
Pilot Gas Pressure					
Manifold Gas Pressure					
Carbon Dioxide CO ₂ (8-9%)					
Oxygen O ₂ (5-7%)					
Carbon Monoxide CO (less than 200 ppm)					
Nitrogen Oxide NO _x (if available)					
Vent Pressure (-.02" to -.06" W.C.)					
Gross Vent Temperature °F					
less Room Temperature °F					
= Net Vent Temperature °F					

Important: You must submit the original copy of the completed form to your PVI representative before the warranty will become effective on this product. Contact Customer Service for assistance at 1-800-433-5654.

Comments: _____

Service Company Name: _____ Phone: _____
Service Company Address: _____
Start-up Performed By: _____ Date: _____
Customer Representative: _____ Date: _____